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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,844	04/05/2000	Toshitsugo Ono	P00,0251	6442

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EXAMINER

FERGUSON, LAWRENCE D

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/543,844	Applicant(s) ONO ET AL.	
	Examiner Lawrence D Ferguson	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8-20 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8-20 and 22-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment mailed June 2, 2004.

Claims 1 and 28 were amended, rendering claims 1, 2, 4, 5, 8-20 and 22-28 currently pending.

Claim Rejections – 35 USC § 103(a)

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-5, 8-9, 11, 14-16 and 18-19 and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (U.S. 5,536,425) in view of Aratani et al (U.S. 6,063,468) further in view of Kawakubo et al. (U.S. 6,246,656).

Kondo teaches recording mediums which comprise non-magnetic support and a layer formed on the support on the surface having a coefficient of friction (column 1, lines 16-22), Kondo discloses perfluoropolyether derivatives for recording mediums (column 1, lines 62-64). Kondo discloses the formula $R-COO-R1-N+R2R3R4$ where R, R2, R3 and R4 represents H or a hydrocarbon group having from 6 to 22 carbon atoms (column 2, lines 8-17) as a derivative used in recording mediums. The

Art Unit: 1774

perfluoropolyether contains $F(CF_2CF_2CF_2O)_a$ where a is an integer of 1 or over (column 7, lines 49-64). Kondo discloses a top coat layer (column 2, line 58) and non-magnetic supports including ceramic and glass substrates (column 8, lines 35-41) which constitutes a light transmitting layer that can be illuminated by light along with resin binders (column 8, lines 51-59) including organic materials. Kondo discloses a non-magnetic support made by sputtering (column 9, lines 9-10) with a coat layer formed on the support (column 9, lines 14-15). Kondo discloses a coefficient of friction measurement (column 11, lines 55-56). In claims 22 and 28, the phrase, 'skew correcting member is formed by coating and curing a UV curable resin' introduces a process limitation to the product claim. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966. Further, process limitations are given no patentable weight in product claims. A dynamic frictional coefficient equal to 0.3 or less and a skew margin less than $84.115(\lambda/NA^3/t)$ includes 0. Kondo does not disclose the precise thicknesses, thickness variation, hardness, surface resistance, surface tension or moisture absorption.

Aratani teaches an optical recording medium with a light transmissive layer and recording portion (column 6, lines 39-47). Aratani teaches a pencil hardness of at least 'H' (column 4, lines 37-38) where the light transmissive layer is formed of polycarbonate with a thickness of 100 micrometers (column 7, lines 14-15). The reference teaches surface resistance of 10^{12} - $10^{13}\mu$ (column 7, line 42 and column 12, lines 24-25) and

Art Unit: 1774

thickness range as in claim 4 (column 1, lines 25-30). Aratani teaches forming the surface layer with SiN by sputtering and having a coefficient of friction less than or equal to 0.3 (column 11, lines 34-50) having a surface tension (column 12, line 11) and water absorption (column 12, lines 34-37). Kondo and Aratani are analogous art because they are from the same field of optical recording mediums. It would have been obvious to one of ordinary skill in the art to include the surface tension and pencil hardness of at least 'H' in the recording medium of Kondo to increase durability of the optical recording medium. Additionally, it would have been obvious to one of ordinary skill in the art to include the water absorption because Aratani teaches it helps reduce corrosion of the recording layer (column 12, lines 31-34).

Neither reference discloses a skew member. Kawakubo teaches an optical recording medium having a light transmissive layer (column 2, lines 10-28) having an ultraviolet curing resin coated as a skew correction member on a surface of the base opposite to the side of the light transmissive layer (column 10, lines 1-5). All of the references are analogous because they are all from the field of optical recording mediums. It would have been obvious to one of ordinary skill in the art to include the skew correction member with the optical recording medium of Kondo because Kawakubo teaches the skew correction member reduces the tilt or bending of the disk (column 10, lines 1-2).

Claim Rejections – 35 USC § 103(a)

3. Claims 10, 12-13, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (U.S. 5,536,425) in view of Aratani et al (U.S. 6,063,468) in view of Kawakubo et al. (U.S. 6,246,656) further in view of Akutsu (U.S. 5,864,357).

Kondo, Aratani and Kawakubo are relied upon for claims 1-2, 4-5, 8-9, 11, 14-16 and 18-19, 22-28. Kondo does not disclose inorganic material made of SiO_x , said surface layer formed of an electrically conductive material consisting of indium oxide or tin oxide or In or Sn.

Akutsu teaches a light transmitting electrically conductive layer (column 2, lines 49-50) consisting of SnO_2 , In_2O_3 (column 4, lines 47-49) and silicon nitride and silicon carbide (column 5, lines 59-60) used in a recording material (column 7, line 21). Akutsu teaches using a spray coating method (column 4, line 52).

All of the prior art are analogous art because they are from the same field of recording media. It would have been obvious to one of ordinary skill in the art to include the light transmitting electrically conductive layer consisting of SnO_2 , In_2O_3 , silicon nitride and silicon carbide in the recording medium of Kondo because Akutsu teaches that these components are used to increase the resistivity and hardness of the recording medium.

Response to Arguments

4. Rejection made under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 and Figure 2 of U.S. Patent No. 6,309,726 has been withdrawn due to Applicant's amendments to claims 1 and 28.

Applicant's arguments of rejection under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (U.S. 5,536,425) in view of Aratani et al (U.S. 6,063,468) further in view of Kawakubo et al. (U.S. 6,246,656) have been considered but are unpersuasive. Applicant argues Kondo, Aratani nor Kawakubo considered either alone or in combination discloses a perfluoropolyether group represented by the formulas (3), (4), (5), and/or (6). Examiner respectfully disagrees because Kondo discloses the formula $R-COO-R1-N+R2R3R4$ where R, R2, R3 and R4 represents H or a hydrocarbon group having from 6 to 22 carbon atoms (column 2, lines 8-17) as a derivative used in recording mediums, where the perfluoropolyether contains $F(CF_2CF_2CF_2O)_a$ where a is an integer of 1 or over (column 7, lines 49-64). The perfluoropolyether containing $F(CF_2CF_2CF_2O)_a$ where a is an integer of 1 or over meets the newly added claim limitation of formula 3.

Applicant's arguments of rejection under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (U.S. 5,536,425) in view of Aratani et al (U.S. 6,063,468) in view of Kawakubo et al. (U.S. 6,246,656) further in view of Akutsu (U.S. 5,864,357) have been considered but are unpersuasive. Applicant argues Kondo, Aratani nor Kawakubo considered either alone or in combination discloses a perfluoropolyether group represented by the formulas (3), (4), (5), and/or (6). Examiner respectfully disagrees

Art Unit: 1774

and maintains that Kondo discloses the formula $R-COO-R1-N+R2R3R4$ where R, R2, R3 and R4 represents H or a hydrocarbon group having from 6 to 22 carbon atoms (column 2, lines 8-17) as a derivative used in recording mediums, where the perfluoropolyether contains $F(CF_2CF_2CF_2O)_a$ where a is an integer of 1 or over (column 7, lines 49-64). The perfluoropolyether containing $F(CF_2CF_2CF_2O)_a$ where a is an integer of 1 or over meets the newly added claim limitation of formula 3.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Art Unit: 1774

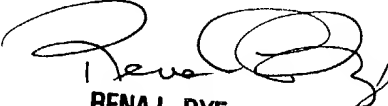
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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